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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,957	09/10/2003	Tanveer R. Khondker	42P16654	5863

8791 7590 10/17/2007

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EXAMINER	
ABRAHAM, ESAW T	

ART UNIT	PAPER NUMBER
2112	

MAIL DATE	DELIVERY MODE
10/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/659,957	KHONDKER ET AL.	
	Examiner	Art Unit	
	Esaw T. Abraham	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-27* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election / Restriction

Restriction to one of the following invention is required under 35 U.S.C. 121

Group I. Claims 1-18 and 25-27, drawn to:

A method for testing an integrated device comprising strobing a data with a strobe edge; and measuring a setup parameter for at least one input/output circuit by pulling in the strobe edge in predetermined decrements up to a single phase of a clock (**as in claim** 1) classified in 714/724.

A method for testing an integrated device comprising strobing a data with a strobe edge; and measuring a hold parameter for at least one input/output circuit by pulling in the strobe edge in predetermined decrements up to a single phase of a clock (**as in claim 5**) classified in 714/724.

A method for testing an integrated device comprising strobing a data with a strobe edge; and measuring a setup parameter for at least one input/output circuit by pulling in the strobe edge in predetermined decrements up to a single phase of a clock, inverting the clock after the

strobe edge has been pulled in by at least the single phase of the clock; and holding the strobe edge constant, after the strobe edge has been pulled in by at least the single phase of the clock, while pushing the data out in predetermined increments (**as in claim 9**) classified in 714/724..

A method for testing an integrated device comprising strobing a data with a strobe edge; and measuring a hold parameter for at least one input/output circuit by pulling in the strobe edge in predetermined decrements up to a single phase of a clock, inverting the clock after the strobe edge has been pulled in by at least the single phase of the clock; and holding the strobe edge constant, after the strobe edge has been pulled in by at least the single phase of the clock, while pushing the data out in predetermined increments (**as in claim 25**) classified in 714/724. .

Group II. Claims 19-24, drawn to:

A circuit for duty cycle clock generation comprising: the circuit to receive an input clock; a plurality of delay elements in a serial manner to delay an inverted version of the input clock based on a control logic; and a multiplexer to receive a plurality of delayed and inverted versions of the input clock from the plurality of delay elements, and to forward either the input clock or one of the plurality of delayed and inverted versions of the input clock (**as in claim 19**) classified in 714/700.

A circuit for clock generation comprising: a first, second and third multiplexer to receive a clock at a first input; and the third multiplexer to receive a delayed version of the clock at a second input, the third multiplexer to select either the clock or the delayed version of the clock based at least in part on a push data enable signal (**as in claim 22**) classified in 714/700. .

The invention are distinct, each from the other because of the following reasons: Invention Group I and group II are related as subcombinations disclosed **as usable together in a single combination.** The subcombinations are distinct from each other if they are shown to be separately usable.

In the instance case, invention Group I has separate utility separate utility such as testing an integrated device comprising strobing a data with a strobe edge; and measuring a setup parameter for at least one input/output circuit by pulling in the strobe edge in predetermined decrements up to a single phase of a clock.

In the instant case, the invention of Group II has separate utility such circuit for duty cycle clock generation comprising: the circuit to receive an input clock; a plurality of delay elements in a serial manner to delay an inverted version of the input clock based on a control logic; and a multiplexer to receive a plurality of delayed and inverted versions of the input clock from the plurality of delay elements, and to forward either the input clock or one of the plurality of delayed and inverted versions of the input clock. See MPEP 806.05(d).

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the

election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the specification. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Esaw T. Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8am-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571) 272-6962. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Esaw Abraham

Esaw Abraham

Art unit: 2112